

NOTES ON NEW AND NOTEWORTHY PLANTS. V

Harold N. Moldenke

ALOYSIA LYCIOIDES var. *PARAGUARIENSIS* (Briq.) Moldenke, comb. nov.

Lippia ligustrina var. *paraguariensis* Briq., Ann. Conserv. & Jard. Bot. Genève 7--8: 305. 1904.

ALOYSIA LYCIOIDES var. *SCHULZII* (Standl.) Moldenke, comb. nov.

Lippia ligustrina var. *Schulzii* Standl., Field Mus. Publ. Bot. 4: 256. 1929.

DURANTA PARVIFOLIA Moldenke, sp. nov.

Frutex ramosus; ramis ramulisque graciliusculis rigidis griseis glabratibus, juventute acutiuscule tetragonis, senectute obsolete tetragonis; hornotinis gracilibus brunnescentibus adpresse strigillosis; nodis saepe spinosis; foliis oppositis numerosis; petiolis strigilloso-puberulis; foliis crassis oblanceolato-ellipticis, ad apicem rotundatis vel obtusis, ad basin longe acuminatis, conspicue revolute-marginatis, integerrimis vel subintegris, supra glabris, subtus minute puberulis vel glabrescentibus.

Shrub, about 2.5 m. tall, abundantly branched; branches and branchlets rather slender, stiff, light-gray, glabrate, rather acutely tetragonal when young, obsoletely tetragonal in age; youngest twigs slender, brownish in drying, strigillose with closely appressed hairs; nodes not amulate but often bearing a pair of stiff ascending spines less than 1 cm. long, very sharp; principal internodes 0.4--2.5 cm. long, usually decidedly abbreviated; leaves decussate-opposite, abundant; petioles very slender, 2--5 mm. long, strigillose-puberulent; blades thick-textured, bright-green above, brunnescent in drying, lighter beneath, oblanceolate-elliptic, 0.8--2.6 cm. long, 5--11 mm. wide, usually rounded or obtuse at the apex, rarely subacute, long-acuminate at base, definitely and conspicuously revolute-margined, entire or sometimes with a few tiny erect teeth at or near the apex, glabrous (except for the midrib) and very shiny above or with a few widely scattered hairs, very minutely and inconspicuously puberulent along the venation or glabrous beneath; midrib slender, deeply impressed and short-strigillose above, very prominent beneath; secondaries 2 or 3 per side, arcuate-ascending, deeply impressed above and very prominent beneath, anastomosing near the margins; veinlet reticulation subimpressed above when viewed under a hand lens, obscure beneath; inflorescence axillary, abundant, opposite, 2--6 cm. long, rather few-flowered, nutant; peduncles (1 cm. or less long) and rachis very slender, brunnescent like the youngest twigs, densely appressed-strigillose; pedicels filiform, 1--6 mm. long, usually quite elongated, densely appressed-strigillose; a few foliaceous bracts sometimes present toward the base

of the racemes; bractlets and prophylla linear, 1--2 mm. long, densely appressed-strigillose, brunnescent; calyx tubular, 4--6.5 mm. long, about 2 mm. in diameter, densely appressed-pubescent with more or less antrorse whitish hairs, 5-ribbed, 5-plaited, the rim shortly 5-toothed and 5-apiculate; corolla blue, its tube 8--9 mm. long, densely sordid-puberulent, its limb 8--9 mm. wide.

The type of this species was collected by Mello Barreto (no. 11057) in capão, Campo do Faco, Minas Geraes, Brazil, on November 6, 1940, and is deposited in the Britton Herbarium at the New York Botanical Garden.

JUNELLIA CHUBUTENSIS Moldenke, sp. nov.

Frutex; ramis gracilibus griseis vel albidis suberoso-striatis glabris; ramulis brevissimis stramineis gracillimis dense pubescentibus; foliis decussatis caducis; petiolis pubescentibus; laminis firmis oblongis integris, ad apicem acutis vel obtusis, plerumque subrevoluto-marginatis, utrinque densiuscule breviter pubescentibus; pilis ad basin bulbosis.

Shrub; branches slender, light-gray or almost white, corky-ridged, glabrous; branchlets apparently very short, stramineous, very slender, rather abundantly pubescent with erect whitish hairs; nodes not amulate; principal internodes much abbreviated, 1--5 mm. long on the branchlets, 2--17 mm. long on the branches; leaves decussate-opposite, apparently caducous; petioles 0.5 mm. long, pubescent; blades firm-textured, oblong, uniformly dark-green on both surfaces, 4--9 mm. long, 1.5--4.5 mm. wide, acute or obtuse at the apex and base, entire, mostly subrevolute at the margins, rather densely short-pubescent on both surfaces with erect, stiff, bulbous-based hairs; midrib prominent beneath, impressed above; secondaries and veinlets not visible on either surface; inflorescence subcapitate, 1--2 cm. long in fruit, about 1.3 cm. wide in fruit, dense; bractlets and prophylla linear, about 2 mm. long, very densely pubescent; calyx tubular, about 5 mm. long and 2 mm. wide, very densely pubescent with gray hairs, 5-toothed, the teeth apiculate; corolla-tube about 8 mm. long, glabrous, its lobes about 2 mm. long, glabrous; fruiting-calyx slightly enlarged, plainly 5-ribbed, densely pubescent; cocci 4, oblong-triangular, about 5 mm. long, broadly 2-alate (the wings each almost 1 mm. wide), glabrous and nitid above, densely cinereous-strigillose beneath, slightly subcucullate at both ends.

The type of this remarkably distinct species was collected by Carlos A. O'Donnell at Puerto Madryn, Chubut, Argentina, on October 24, 1945, and is deposited in the Britton Herbarium at the New York Botanical Garden.

JUNELLIA ECHEGARAYI var. *CORDIFOLIA* Moldenke, var. nov.

Haec varietas a forma typica speciei recedit foliis valde variabilibus oblanceolato-spathulatis vel ellipticis vel subrotundis vel ovatis, ad basin longe attenuatis vel rotundatis vel cordatis, et sarmentis pedunculisque rhachideque calicibusque bracteolisque tantummodo puberulis.

This variety differs from the typical form of the species in having its leaves very variable in size and shape, usually 4--8 mm. long and 1--4 mm. wide, sometimes oblanceolate-spatulate, sometimes elliptic or subrotund or ovate, the base long-attenuate on the narrow leaves but rounded or cordate on the broader ones, and the pubescence on the twigs, peduncles, rachis, calyxes, and bractlets merely puberulent.

The type was collected by C. and G. Grandjot (no. 4714) near Uspallata, at an altitude of 2300 m., Las Heras, Mendoza, Argentina, on December 21, 1937, and is deposited in the Herbario Ruiz Leal, Godoy Cruz, Mendoza.

JUNELLIA ECHEGARAYI var. *PUBERULENTA* Moldenke, var. nov.

Haec varietas a forma typica speciei samentis pedunculisque rhachideque calicibusque bracteolisque tantummodo puberulis recedit.

This variety differs from the typical form of the species in having the pubescence of its twigs, peduncles, rachis, calyxes, and bractlets merely puberulent.

The type was collected by C. and G. Grandjot (no. 4713) in the close proximity of Uspallata, at an altitude of 2300 m., Las Heras, Mendoza, Argentina, on December 21, 1937, and is deposited in the Herbario Ruiz Leal, Godoy Cruz, Mendoza. The leaf-shape here is as in the typical form and does not show the striking variation seen in var. cordifolia.

JUNELLIA LIGUSTRINA (Lag.) Moldenke, comb. nov.

Verbena ligustrina Lag., Gen. & Sp. Nov. 18. 1816.

JUNELLIA O'DONELLI Moldenke, sp. nov.

Frutex humilis caespitosus; caulibus irregularibus griseis pulverulentis vel glabris; ramis ramulisque numerosis brevibus sarmentosis densiuscule puberulis; internodiis valde abbreviatis; foliis numerosis decussatis sessilibus trifidis viridibus utrinque puberulis valde revoluto-marginatis, ad apicem subulato-acutis; costa supra valde impressa.

Low matted shrub; stems to 3 dm. long, irregular, with flaky bark, pulverulent or glabrescent, gray; branches and branchlets numerous, short, tufted, rather densely puberulent, twiggy; internodes much abbreviated, 1--4 mm. long throughout; leaves numerous, decussate-opposite, sessile, often with miniature ones in their axils, trifid almost to the base, bright-green on both surfaces, the segments narrowly linear, 2--4 mm. long, 0.5 mm. wide or less, the 2 lateral ones quite divergent on mature leaves, puberulent on both surfaces, decidedly revoluto-margined, subulate-acute at the apex, the midrib impressed above and decidedly prominent beneath on each segment; veinlets indiscernible; inflorescence terminal, few-flowered, usually 2--5-flowered; calyx tubular, 6--7 mm. long, about 2 mm. wide, puberulent, distinctly 5-ribbed, 5-toothed, the teeth apiculate, ciliate; corolla-tube about 9 mm. long, glabrous, the lobes about 2 mm. long, bifid at the apex, often reflexed, glabrous; stamens equaling the mouth of the corolla-tube.

The type of this species was collected by Carlos A. O'Donnell (no. 4000) -- in whose honor it is named -- at Güer Aike, Santa Cruz, Argentina, on December 15, 1945, and is deposited in the Britton Herbarium at the New York Botanical Garden.

LANTANA CAMARA f. *PARVIFOLIA* Moldenke, f. nov.

Haec forma a forma typica speciei recedit caulibus ramisque inermibus, internodiis 1--2 cm. longis, et foliis uniforme parvioribus.

This form differs from the typical form of the species in being of smaller stature, having completely unarmed stems and branches, with the principal internodes only 1--2 cm. long, and with uniformly smaller leaves, the ovate or rarely suborbicular often rather obtuse blades only 1--2.5 cm. long and 1--2 cm. wide, the peduncles 1--1.5 cm. long.

The type was cultivated in the greenhouses of the New York Botanical Garden from seed collected by E. J. Alexander and T. MacDougall (no. 1580) along a roadside near Tehuantepec, Oaxaca, Mexico, in late May, 1945, and is deposited in the Britton Herbarium at the New York Botanical Garden. The characters of the plant seem to breed true and so I am constrained to award it a scientific designation.

LANTANA DINTERI Moldenke, sp. nov.

Frutex; caulibus ramisque pallide griseis vel albidis glabris; samentis gracilibus obtuse tetragonis leviter puberulis resinoso-granulosis; internodiis plerumque abbreviatis; foliis decussatis vel approximatis numerosis; petiolis gracillimis dense puberulis et resinoso-granulosis; foliis leviter chartaceis utrinque viridibus lanceolatis, ad apicem rotundatis vel subacutis, regulariter serrato-dentatis, ad basin acuminatis, supra minute asperulis, non scabris, subtus densissime resinoso-punctatis, juventute adpresso-puberulo-pulverulentis.

Shrub; stems and branches decidedly woody, the bark very light-gray or white, glabrous, fissured; twigs slender, obtusely tetragonal, lightly puberulent and resinous-granular, greenish-stramineous; nodes not plainly annulate; principal internodes abbreviated, mostly 3--22 mm. long or on the larger branches to 4.5 cm. long; leaves abundant, decussate-opposite or rarely approximate; petioles very slender, 2--6 mm. long, densely puberulent and resinous-granular; blades thin-chartaceous, bright-green on both surfaces or slightly lighter beneath, lanceolate, 2--3.8 cm. long, 6--14 mm. wide, rounded or subacute at apex, regularly serrate-dentate almost to the base, acuminate narrowed into the petiole at base, minutely asperulous above but not rough to touch, very densely resinous-punctate beneath, minutely appressed-puberulent-pulverulent on the venation beneath when immature; midrib very slender, plane above, prominulous beneath; secondaries very slender, 6 or 7 per side, ascending, hardly arcuate, plane above, prominulous beneath; vein and veinlet reticulation abundant, usually indiscernible above, conspicuous beneath on immature leaves, often much less so on mature leaves; inflorescence capitate, axillary

and usually only 1 per axil, shorter than the subtending leaf; peduncles filiform, 6--15 mm. long, tetragonal, finely puberulent and resinous-granular; heads dense, rather few-flowered, 7--13 mm. long, 10--15 mm. wide; bractlets ovate, large, conspicuous, closely imbricate, the lowermost often much larger and divergent, 7--10 or more mm. long, 3 or more mm. wide, acuminate at apex, sparsely and minutely strigillose and resinous-granular, the lowermost often foliaceous, the margins often subrevolute; corolla white, its tube 5--7 mm. long, puberulent on the outside, the limb to 5 mm. wide.

The type of this very distinct species was collected by Kurt Dinter (no. 6823) at Kalksberg, Karibib, Southwest Africa, on January 12, 1934, and is deposited in the herbarium of the Naturhistoriska Riksmuseum at Stockholm. The species is named in honor of the collector who has done such very noteworthy work on the flora of Southwest Africa.

LANTANA FUCATA f. *ALBIFLORA* Moldenke, f. nov.

Haec forma a forma typica speciei corollis albis recedit.

This form differs from the typical form of the species in having pure white corollas.

The type was collected by A. R. Cuzzo (no. 918) at Serrazuela, Punta de Sierra, dept. Cruz del Eje, Córdoba, Argentina, on November 8, 1945, and is deposited in the Britton Herbarium at the New York Botanical Garden.

LANTANA MICRANTHA var. *ARMATA* Moldenke, var. nov.

Haec varietas a forma speciei typica recedit caulibus dense armatis et corollis atropurpureis.

This variety differs from the typical form of the species in having the stems abundantly armed with stout hooked prickles and the corollas dark-purple in color.

The type was collected by Martin Cárdenas (no. 2380) in dry argillaceous soil on the road to Vacas, above Arami, at an altitude of 2600 m., Cochabamba, Bolivia, in February, 1944, and is deposited in the Britton Herbarium at the New York Botanical Garden. The collector describes the plant as a thorny shrub about 6 dm. tall, with dark-purple flowers.

LANTANA MICRANTHA f. *VIOLACEA* Moldenke, f. nov.

Haec forma a forma typica speciei corollis roseis vel purpureis vel rubellis recedit.

This form differs from the typical form of the species in having its corollas lilac, pink, purple, rose, or carmine in color.

The type was collected by A. G. Schulz (no. 1459) at the edge of mountains, Colonia Benítez, Chaco, Argentina, in November, 1935, and is deposited in the Britton Herbarium at the New York Botanical Garden. The collector describes the plant as a shrub 2--3 m. tall, the foliage with a disagreeable odor, and the flowers uniformly lilac in color. Other collections with pink, purple, rose, or carmine flowers, however, had better be placed with the type in this color-form.

LIPPIA AFRICANA Moldenke, sp. nov.

Frutex; ramis subgracilibus obtusiuscule tetragonis albido-strigosis densiuscule resinoso-granulosis; foliis decussatis; petiolis gracillimis strigosis resinoso-granulosis; laminis chartaceis utrinque viridibus ellipticis, ad apicem et basin acutis, regulariter adpresso-serratis, supra bulboso-strigosis et subbullatis, subtus dense breviterque pubescentibus et resinoso-granulosis.

Shrub; branches rather slender, rather obtusely tetragonal, strigose with whitish antrorse hairs and rather densely resinous-granular; nodes annulate; principal internodes 3--5.8 cm. long; leaves decussate-opposite, usually with a cluster of smaller ones on much abbreviated twigs in their axils; petioles very slender, 1--3 mm. long, antrorsely strigose and resinous-granular like the branches; blades chartaceous, bright-green on both surfaces, elliptic, 2--3 cm. long, 8--13 mm. wide, acute at apex and base, regularly appressed-serrate, strigose above with bulbous-based whitish antrorse hairs and subbullate, densely short-pubescent and densely resinous-granular beneath; midrib very slender, impressed above, prominent beneath; secondaries very slender, 2--4 per side, arcuate-ascending, impressed above, prominulous beneath; vein and veinlet reticulation abundant, impressed above, the larger parts prominulous beneath; inflorescence spicate, abundant, 2 or 3 per node, usually borne at each of the upper 8 or more nodes, surpassing the subtending leaves; peduncles slender, 2.5--4 cm. long, densely strigillose and resinous-granular, rarely terminated by two equal divergent spikes; floriferous spikes subcapitate or elongating to about 13 mm., to 9 mm. wide, densely many-flowered; bractlets ovate, 5--5.5 mm. long, about 2.5 mm. wide, attenuate-acuminate at the apex, densely strigose and resinous-granular; corolla 5--6 mm. long, usually subequaling the subtending bractlet, the tube puberulent-granular at the apex on the back, the limb 1.5--2 mm. wide.

The type of this species was collected by Erik Wall in a forest 9 miles west of Nylstroom, at an altitude of 4300 feet, Transvaal, Union of South Africa, on October 3, 1938, and is deposited in the herbarium of the Naturhistoriska Riksmuseum at Stockholm. The species has been collected quite often in recent years, but has hitherto been confused with "*L. asperifolia* Rich." with which it has usually been identified with a question or of which it has been regarded as a form or variety. The size of the heads and bractlets distinguishes it at once.

LIPPIA AFRICANA var. *VILLOSA* Moldenke, var. nov.

Haec varietas a forma typicali speciei recedit ramis sarmen-tisque petiolisque laminisque foliorum bracteolisque villosis.

This variety differs from the typical form of the species in the villous pubescence on branches, twigs, petioles, leaf-blades, peduncles, and bractlets, and in its larger flowering-heads, the heads being to 13 mm. wide and the bractlets to 7 mm. long.

The type of this variety was collected by Åke Holm (no. 32)

on a steppe on the western side of Mount Elgon, at an altitude of 2200 m., Uganda, on March 20, 1938, and is deposited in the herbarium of the Naturhistoriska Riksmuseum at Stockholm.

LIPPIA LUPULIFORMIS Moldenke, sp. nov.

Frutex; ramulis gracilibus acute tetragonis griseis pustulato-asperis; hornotinis dense substrigosis (pilis albidis bulbosis) dense resinoso-granulosis brunneis; sterigmis foliorum elevatis perspicuis divergentibus; alabastris dense villosis; foliis decussatis vel ternatis vel approximatis; petiolis densiuscule substrigoso-villosulis resinoso-granulosis marginatis; foliis chartaceis ovatis, ad apicem rotundatis vel subacutis, ad basin acutis vel acuminatis vel rotundatis, supra valde scabris bullatis, utrinque dense breviterque pubescentibus, subtus dense resinoso-granulosis, uniforme serrato-dentatis.

Shrub to 1.5 m. tall; branchlets slender, acutely tetragonal and grayish, pustulate-asperous, the younger parts and twigs rather densely substrigose with whitish bulbous-based hairs and densely resinous-granular, brownish; leaf-scars elevated on conspicuous divergent sterigmata; buds densely white-villous; nodes annulate on young twigs, not annulate on older branches; principal internodes 1.2--3.2 cm. long on older branchlets, abbreviated to 2--9 mm. on twigs; leaves decussate-opposite or rarely ternate or approximate; petioles slender, 1--5 mm. long, rather densely substrigose-villosulous and resinous-granular, margined, deeply canaliculate above; blades chartaceous, dark-green above, lighter beneath, ovate, 1.7--3.5 cm. long, 0.9--2 cm. wide, rounded or subacute at apex, acute or acuminate at base or sometimes rounded, very scabrous and bullate above, densely short-pubescent on both surfaces, densely resinous-granular beneath, uniformly serrate-dentate from base to apex, the teeth often decidedly revolute-margined; midrib impressed above, prominent beneath; secondaries very slender, about 5 per side, ascending, hardly arcuate, impressed above, prominent beneath; vein and veinlet reticulation abundant, usually deeply impressed above and prominent beneath; inflorescence spicate, axillary, surpassing the subtending leaf, 1 or 2 per node; peduncles slender, 4--6.5 cm. long, asperous-hirsutulous and resinous-granular, tetragonal; spikes at first capitate, later elongating to 2 cm., 1.5--2 cm. wide, strobiliform, densely many-flowered; bractlets large and conspicuous, densely imbricate, ovate, 8--10 mm. long, 4--7 mm. wide, acute or sub-acuminate at apex, rather sparsely strigillose and granular; corolla-tube 6--7 mm. long, densely gray-pubescent on the outside, the limb 4--5 mm. wide.

The type of this species was collected by H. Rudatis (no. 1145) at G'Merrum, at an altitude of 650 m., Dumisa, district Alexandra, Natal, Union of South Africa, on September 11, 1910, and is deposited in the herbarium of the Naturhistoriska Riksmuseum at Stockholm.

LIPPIA VIOLACEA Moldenke, sp. nov.

Frutex; ramis stramineis vel brunnescentibus obtusiuscule

tetragonis breviter pubescentibus, pilis uncinatis ad basin bulbosis; ramulis densissime pubescentibus virgatis; foliis decussatis numerosis; petiolis gracillimis dense cinereo-pubescentibus; foliis ellipticis vel ovatis chartaceis, ad apicem acutis vel obtusis, ad basin acutis, serrulatis, supra dense puberulis et resinoso-punctulatis, subtus dense breviterque pubescentibus et plusminusve resinoso-punctulatis.

shrub, about 2 m. tall; branches stramineous or brunnescent, rather obtusely tetragonal, short-pubescent with uncinately bulbous-based hairs; branchlets much more densely pubescent with sordid-gray or cinereous hairs, virgate; nodes annulate; principal internodes 1--4.8 cm. long; leaves decussate-opposite, numerous; petioles very slender, 1--4 mm. long, densely cinereous-pubescent; blades more or less diamond-shaped or elliptic, varying to ovate, chartaceous, 1.3--2.5 cm. long, 9--15 mm. wide, acute or obtuse at apex, regularly serrulate from below the middle to the apex, acute at base, densely puberulent and resinous-punctulate above, very densely short-pubescent and more or less resinous-punctulate beneath; midrib very slender, subimpressed above, prominulous beneath; secondaries very slender, 4 or 5 per side, ascending, not arcuate, often subimpressed above, subprominulous beneath, not at all anastomosing, each secondary or one of its branches ending in a sinus between two teeth; veinlet reticulation obscure or subimpressed above, plane beneath; inflorescence axillary, capitate, 2 per node, 1.5--2 cm. long, mostly about equaling the subtending leaves; peduncles very slender, about 1 cm. long, densely short-pubescent with rather appressed sordid-cinereous hairs; heads densely flowered, hemispheric, 1--1.5 cm. wide; bractlets lanceolate-lingulate, about 5 mm. long and 1.5 mm. wide, strigillose; calyx about 5 mm. long, densely white-hirsute especially on the margins and resinous-granular; corolla violet, its tube 5--6 mm. long, rather scattered-strigillose or puberulent above the calyx, its limb about 5 mm. wide.

The type of this species was collected by Mendes Magalhães (no. 1768) on the campo between Capivari and Pico do Itambé, Serra Quebrada, município Serro, Minas Geraes, Brazil, on May 3, 1942, and is deposited in the Britton Herbarium at the New York Botanical Garden.

PAEPALANTHUS STANDLEYI Moldenke, sp. nov.

Herba; caule valde abbreviato; foliis rosulatis numerosis viridibus nitentibus ligulatis obtusis firmis satis revolutomarginatis, subtus parvisime obscureque puberulis, supra pulverulentis, multo-nervatis; pedunculis numerosis crassiusculis sexangulatis subcompressis densissime villosis.

Herb; stem much abbreviated; leaves tufted, numerous, bright-green, shiny, strap-shaped, broadest at the base, 6--8 cm. long, 8--9 mm. wide at the middle, obtuse at the apex, firm-textured, somewhat revolute-margined especially toward the apex, very finely and usually obscurely puberulent beneath, pulverulent above, many-nerved; peduncles 15 or more per plant, rather stout, 27--30 cm. long, 6-angled, somewhat flattened,

very densely and persistently villous from base to apex with uniform fulvous-brunneous hairs; sheaths cylindric, usually about equaling the leaves, 6--6.5 cm. long, rather closely appressed to the peduncle, many-costate, rather densely pubescent with spreading brownish hairs, obliquely split at the apex, the blade lanceolate, about 1 cm. long, erect, appressed to the peduncle; heads obovate-hemispheric, 1--1.2 cm. high, 2--2.3 cm. wide, very snowy; involucrel bracts broadly ovate, leathery, deep chestnut-brown and very shiny on both surfaces, 7--9 mm. long, 4--5 mm. wide at the base, long-attenuate or subacuminate at the apex, in 4 or 5 series, the outermost ones densely tomentellous or subvillous, the inner ones white-villosulous on the lower half and pulverulent above, long-ciliate with white hairs on the margins; receptacle very densely and conspicuously white-villous with multicellular white hairs about 5 mm. long; receptacular bractlets numerous, linear, 6--6.5 mm. long, about 0.5 mm. wide, dark-brown on the upper half, light-brown toward the base, densely villous-barbellate on the inner surface at and near the apex; staminate flowers apparently of two types: in the one type the sepals are 3, connate only at the very base, stramineous, oblanceolate, about 4 mm. long and 1 mm. wide, triangular-acute at the apex, glabrate on both surfaces except for a few, erect, irregular, translucent hairs on the margins, densely villous-barbellate at the apex with straight, erect, white hairs extending about 4 mm. beyond the apex of the sepal; petals 3, about 2 mm. long, connate for about half their length into a tube about 0.7 mm. wide, brownish, the free apex triangular-acute, about 0.5 mm. long, densely long-ciliate with regular, erect, white hairs; stamens 3; filaments 0.6 mm. long; anthers oblong, about 0.8 mm. long and 0.4 mm. wide; style-vestiges 3, club-shaped, about 0.6 mm. long; in the second type the corolla-tube is 4--5 mm. long, subhyaline, densely villous within, often invaginated at the apex, the filaments elongated to 6 mm.; pistillate florets: sepals 3, separate to the base or practically so, oblong, stramineous, about 4 mm. long and 0.9 mm. wide, 1-ribbed, glabrate on both surfaces except for the apex which is long-barbellate with a dense tuft of erect, straight, white hairs extending 1.5 mm. beyond the apex of the sepal; petals 3, separate to the base, elliptic, about 4.1 mm. long and 1.5 mm. wide, acute or rarely retuse at the apex, stramineous, glabrate on both surfaces and shiny except for the rather uniformly white-ciliate margins and apex, not barbellate; staminodes 3, about 1.5 mm. long; pistils 3; styles glabrous, 5--5.5 mm. long, forked at the apex, the branches about 1 mm. long; ovary 3-lobed, 3-sulcate, 3-celled, glabrous.

The type of this extremely handsome and distinct species was collected by Mello Barreto (no. 9688) in a sandy campo at Bia Vista - Extracção, município Diamantina, Minas Geraes, Brazil, on November 9, 1937, and is deposited in the Britton Herbarium at the New York Botanical Garden. It was determined by the collector of *P. plumosus* (Bong.) Körn., but differs conspicuously from that species in its much larger stature. The species was regarded, on the basis of a Mexia collection, by Dr. P. C.

Standley as P. Warmingianus (Körn.) Körn., which, however, differs in its smooth peduncles, less attenuated involucre bractlets, and floral characters.

SABINA VIRGINIANA var. CREBRA (Fernald & Griscom) Moldenke, comb. nov.

Juniperus virginiana var. crebra Fernald & Griscom, Rhodora 37: 133, pl. 333. 1935.

STACHYTARPHETA PARAGUARIENSIS Moldenke, sp. nov.

Frutex 1--2 m. altus; ramis gracilibus acute tetragonis saepe marginatis dense breviterque pubescentibus, hornotinis velutinis; ramulis sarmentosis densissime velutino-pubescentibus cinereis; petiolis obscuris latissime alatis; laminis submembranaceis utrinque atroviridibus in siccitate brunnescentibus, ovatis, at apicem acutis vel obtusis, ad basin longe acuminatis, crasse serratis utrinque dense breviterque pubescentibus; corollis coeruleis.

Shrub, 1--2 m. tall; branches slender, acutely tetragonal, often margined, densely short-pubescent with cinereous hairs, velutinous on the younger parts; branchlets and twigs similar to the branches but even more densely velutinous-pubescent, cinereous; nodes annulate; principal internodes 1.3--8.4 cm. long; leaves decussate-opposite, often with several smaller ones in their axils; petioles obscure, 3--15 mm. long, very broadly winged, indistinguishable from the leaf-base; blades submembranous, dark-green on both surfaces, brunnescent in drying, ovate, 3--7.5 cm. long, 1.3--3.2 cm. wide, obtuse or acute at apex (in outline), long-acuminate into the petiole at base, coarsely serrate from below the middle to the apex with broadly triangular acute or subapiculate teeth, densely short-pubescent on both surfaces, subvelutinous on the midrib and secondaries beneath when immature, the hairs canescent or cinereous; midrib slender, flat above, prominulous beneath; secondaries very slender, 4--6 per side, ascending, hardly at all arcuate, flat above, subprominulous beneath; veinlet reticulation obscure, except for the larger tertiaries beneath; inflorescence spicate, terminal, to about 20 cm. long, closely many-flowered; flowers imbricate; rachis rather slender, densely canescent-puberulent, rather deeply sculptured after anthesis; peduncles obsolete or to 2 cm. long and densely canescent-velutinous; bracts lanceolate, about 5 mm. long, 1--1.3 mm. wide, long-attenuate to the subacuminate apex, cinereous-puberulent, usually densely white-ciliate on the margins (especially when young); calyx tubular, about 8 mm. long, 1--1.3 mm. wide, densely short-pubescent with brownish hairs, 5-ribbed, the rim 5-toothed, the teeth mucronate, almost 1 mm. long; corolla sea-blue, its tube about 1 cm. long, obscurely pulverulent-puberulent or glabrescent above the calyx, its limb about 1 cm. wide, glabrate.

The type of this distinct species was collected by Teodoro Rojas (no. 13615) on hillslopes among small trees at Fuerte Olimpo in the Chaco region of Paraguay on October 18, 1946, and

is deposited in the Britton Herbarium at the New York Botanical Garden.

STILBE VERTICILLATA (Ecklon & Zeyher) Moldenke, comb. nov.
Trichocephalus verticillatus Ecklon & Zeyher, *Enum. Pl. Afr. Austr.* 131. 1835.

STILBE VERTICILLATA var. *CUSPIDATA* (H. H. W. Pearson) Moldenke, comb. nov.

Stilbe mucronata var. *cuspidata* H. H. W. Pearson in *Thiselton-Dyer, Fl. Cap.* 5: 184. 1901.

TITHYMALOPSIS IPECACUANHAE f. *ORBICULATA* Moldenke, f. nov.

Haec forma a forma typica speciei foliis orbiculatis viridibus recedit.

This form differs from the typical form of the species in its green orbicular leaf-blades.

The type was collected by H. N. Moldenke (no. 10476) in sandy soil along a roadside at Smithtown, Suffolk Co., New York, on May 29, 1938, and is deposited in the Britton Herbarium at the New York Botanical Garden. The form probably corresponds, in part, at least, to Boissier's "*Euphorbia ipecacuanha* var. *portulacoides*", but anyone who has observed these plants growing will agree that it deserves only form rank.

VERBENA KUNTZEANA Moldenke, sp. nov.

Herba; caulibus basin versus saepe decumbentibus; ramis graciliusculis obtuse tetragonis saepe sulcatis dense hirsutulo-pubescentibus griseo-sordidis, pilis plerumque glanduliferis; petiolis indistinctis late alatis; laminis chartaceis ovatis, ad apicem acutis, ad basin acuminatis, crassiuscule regulariterque serratis utrinque dense hirsutulo-pubescentibus, pilis supra plerumque bulbosis.

Herb, several-branched from the base, the lower part of the stems often decumbent; stems and branches rather slender, obtusely tetragonal, the sides often sulcate, densely hirsutulous-pubescent with widely divergent, grayish-sordid, mostly gland-tipped hairs; nodes annulate; principal internodes 2--5 cm. long; leaves decussate-opposite; petioles rather obscure, broadly winged and merging into the leaf-base; blades chartaceous, bright-green above, paler beneath, ovate, 2.5--5 cm. long, 1.4--2 cm. wide, acute at apex, acuminate into the winged petiole at base, rather coarsely but regularly serrate from the widest part to the apex, the teeth rather broadly triangular, obtuse or subacute, densely hirsutulous-pubescent on both surfaces, the hairs often slightly bulbous-based above; midrib slender, impressed above, prominulous beneath; secondaries slender, 3--5 per side, ascending, impressed above, prominulous beneath; veinlet reticulation plane or subimpressed above, the larger parts subprominulous beneath; inflorescence terminal, subcapitate; peduncles slender, 6--8 cm. long, tetragonal, sulcate, densely glandular-hirsutulous; floriferous portion of

the inflorescence about 3.5 cm. long, to 2.5 cm. wide in anthesis; bractlets elongated, linear-lanceolate, 11--13 mm. long, densely glandular-hirsutulous with whitish hairs, often somewhat incurved after the flowers have fallen; rachis densely glandular-hirsutulous; calyx tubular, the tube about 15 mm. long and 2 mm. wide, densely glandular-hirsutulous with whitish hairs, the rim 5-apiculate, the apiculations linear-caudate, unequal, densely glandular-hirsutulous with whitish hairs, the longest ones about 4 mm. long; corolla-tube 15--20 mm. long, densely short-pubescent on the outside, the limb about 10 mm. wide, minutely puberulent on the outer surface, glabrous within.

The type of this distinct species was collected by Carl Axel Magnus Lindman (no. A.3649) at Paraguari, Paraguay, in October, 1893, and is deposited in the herbarium of the Naturhistoriska Riksmuseet at Stockholm. The collector notes that the native name is "flor de vovia". It was first identified by Briquet as V. paraguayensis var. latiuscula Briq. and then as V. platen-sis Spreng. It is named in honor of Carl Ernst Otto Kuntze, who has done such splendid collecting of Verbenaceae and related groups in Asia, Africa, and America, whose keen insight has detected so many varieties and forms worthy of nomenclatural rank, and who fought so eloquently and heroically for fair play and honesty in botanical nomenclature, albeit a losing battle.

VERBENA MAIMII Moldenke, sp. nov.

Frutex usque ad 1.7 m. altus; ramis ramulisque viridibus acute tetragonis ubique glaberrimis nitidisque saepe sulcatis; foliis minutis indistinctis sessilibus oblongis vel linearibus firmis utrinque viridibus decussatis adscendentibus utrinque adpresso-strigillosis, ad apicem acutis 1-nervatis.

Shrub to about 1.7 m. tall, much-branched; branches and branchlets green, acutely tetragonal, completely glabrous throughout, shiny, often sulcate between the angles; twigs numerous, ascending-erect, slender, acutely tetragonal, green and shiny, glabrous; principal internodes 2--5 cm. long; nodes not annulate; leaves very tiny and indistinct, giving the plant an aphyllous appearance, sessile, oblong or linear, rather firm-textured, uniformly bright-green on both surfaces, decussate-opposite, ascending, 3--8 mm. long, about 1 mm. wide, appressed-strigillose on both surfaces, acute at apex, 1-nerved, the midrib slightly elevated beneath and subimpressed above; inflorescence spicate, very abundant, usually in groups of 3 at the tip of each twig, often aggregated in paniculate fashion, the terminal spike usually short-pedunculate, the lateral ones longer-pedunculate, the floriferous portion elongating to almost 3 cm. after anthesis; peduncles very slender, glabrous or minutely strigillose, 3--15 mm. long, tetragonal, green; rachis rather densely strigillose-puberulent with whitish hairs especially visible after the calyxes have fallen off; bractlets lanceolate, very small and obscure, about 1 mm. long, strigose with appressed antrorse whitish hairs, acute at apex; calyx tubular, about 3 mm. long, densely white-strigose with

appressed antrorse hairs, the rim 5-apiculate; corolla blue, its tube about 4 mm. long, glabrous except at the very apex where it is densely white-strigose like the calyx, its limb 3--4 mm. wide, puberulent in the throat within and strigose at the base outside, the lobes glabrous on both surfaces.

The type of this distinct species was collected by Gustaf Oskar Andersson malmé (no. 1141) -- in whose honor it is named -- in a swamp at Villa Rica, Rio Grande do Sul, Brazil, on January 22, 1902, and is deposited in the herbarium of the Naturhistoriska Riksmuseet at Stockholm.

VERBENA PULCHRA Moldenke, sp. nov.

Herba; caulibus procumbentibus vel ascendentibus simplicibus argute tetragonis sulcatis scabris; foliis decussatis; petiolis gracilibus sparsiuscule strigosis marginatis; laminis chartaceis ellipticis vel anguste lanceolatis vel oblanceolatis irregulariter dentatis, ad apicem acutis, ad basin attenuatis vel acuminatis, supra scabrido-strigillosis, subtus molliter breviterque pubescentibus, pilis ad basin bulbosis; corolla pulchra.

Herb; stems procumbent or ascending, several, not branched, sharply tetragonal, sulcate between the angles, scabrous with many short reflexed hairs; principal internodes 3--8 cm. long; nodes more or less annulate; leaves numerous, decussate-opposite, usually with clusters of smaller ones in their axils; petioles slender, 5--8 mm. long, rather sparsely strigose with short antrorsely curved hairs, margined; blades chartaceous, somewhat lighter beneath, elliptic or narrow-lanceolate, varying to oblanceolate, 1.5--5.5 cm. long, 6--15 mm. wide, acute at apex, attenuate or acuminate at base, rather irregularly dentate from the apex almost to the base with rather broadly triangular acute teeth, slightly scabridous-strigillose above, rather softly short-pubescent beneath with bulbous-based hairs; midrib very slender, plane above, prominulent beneath; secondaries very slender, 4 or 5 per side, plane above, prominulent beneath; veinlet reticulation mostly indiscernible above, conspicuous (but not elevated) beneath; inflorescence terminal and in the uppermost axils, the floriferous portion very dense, at first flattened-subcapitate, later elongating to 3 cm. but remaining very dense; peduncles rather stout, 6--8.5 cm. long, tetragonal and sulcate like the stems, reflexed-pilose and more or less rough to the touch; bractlets lanceolate, 4--9 mm. long, 1--1.4 mm. wide, attenuate-acute or subacuminate at the apex, glabrous (or very sparsely pilosulous) except for the long-ciliate margins; calyx tubular, 10--12 mm. long, about 1 mm. wide, 5-costate, purplish especially toward the apex, ciliate-pubescent on the ribs, the teeth unequal, 1--2 mm. long, filiform-appendaged; corolla showy, its tube 15--17 mm. long, very sparsely and minutely puberulent or merely pulverulent outside above the calyx, its limb to 15 mm. wide, pilose in the throat.

The type was collected by Per Karl Hjalmar Dusén (no. 9334) in wet thickets at Calmon, Paraná, Brazil, on March 13, 1910,

and is deposited in the herbarium of the Naturhistoriska Riksmuseum at Stockholm. The calyxes on the type specimen are mostly infested with a fungus which forms tiny brown dots over the surface, which dots under the microscope reveal themselves to be masses of tint brown filaments.

VERBENA PULCHRA var. PALUDICOLA Moldenke, var. nov.

Haec varietas a forma typica speciei recedit laminis foliorum tantummodo 2.4--4.3 cm. longis, 1--2 cm. latis et corollis albis oculiroseis.

This variety differs from the typical form of the species in its leaves being shorter, the blades only 2.4--4.3 cm. long, 1--2 cm. wide, and the corollas white except for a red "eye".

The type was collected by Wilhelm Gustav Herter (no. 99937) in a rather wet sandy marsh, at an altitude of 150 m., exposed to the sunlight in an arroyo, Reanqueras, Rivera, Uruguay, between March 24 and 27, 1907, and is deposited in the Britton Herbarium at the New York Botanical Garden.

VITEX RUFESCENS var. ABLUDENS (Moldenke) Moldenke, comb. nov.

Vitex Perriana var. abludens Moldenke, Alph. List Common Names Verbenac. 21, hyponym (1939); Trop. Woods 64: 39. 1940.

VITEX SPRUCEI var. LONGIDENTATA (Moldenke) Moldenke, comb. nov.

Vitex spongiocarpa var. longidentata Moldenke, Phytologia 2: 31. 1941.

VITEX TRIFOLIA var. SIMPLICIFOLIA f. ALBIFLORA (Y. Matsumura) Moldenke, comb. nov.

Vitex rotundifolia var. albiflora Y. Matsumura, Amatores Herbarii 10: 54. 1943.

THE KNOWN GEOGRAPHIC DISTRIBUTION OF THE MEMBERS OF THE
VERBENACEAE, AVICENNIACEAE, STILBACEAE, AND SYMPHOREMACEAE.

SUPPLEMENT 9

Harold N. Moldenke

Since the preparation of the eighth supplement to this list several thousand additional specimens of these groups have been examined from the herbarium of the Chicago Natural History Museum, the United States National Herbarium at Washington, the University of Massachusetts at Amherst, the United States Field Station at Sacaton, Arizona, the Britton Herbarium of the New York Botanical Garden, the Jardin Botanique de l'Etat at Brussels, the Botanisk Museum of the University of Lund at Lund, Sweden, the Naturhistoriska Riksmuseum at Stockholm, and the Herbario Ruiz Leal at Godoz Cruz, Mendoza, Argentina. This excellent material has brought to light 74 new country or island